**Matric No:** 16/MHS06/036

**Course Code:** MLS 408 (Histopathology Techniques and Museum)

**Assignment (Histopathology Techniques)**

In a tabular form only, compare and contrast sections of the Gastrointestinal tract.

**Answers**

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| **LAYERS** | **SECTIONS OF THE GASTROINTESTINAL TRACT** | | | | | | | |
|  | **UPPER GIT** | | | **LOWER GIT** | | | | |
|  | **ORAL CAVITY** | **OESOPHAGUS** | **STOMACH** | **SMALL INTESTINE** | | | **LARGE INTESTINE** | **ANAL CANAL** |
|  | **DUODENUM** | **JEJUNUM** | **ILEUM** |
| MUCOSA | Non-keratinized striated squamous epithelium lines the soft palate, floor of the mouth. Keratinized striated squamous epithelium lines the gums (gingivae) and hard palate. | Lined by non-keratinized stratified squamous epithelium. The borderline between epithelium and lamina propria is not distinct and numerous papillae extend towards the basal portion of epithelium. | Gastric mucosa (including the gastric pits) is lined by simple columnar epithelium with secretory function. | Simple columnar epithelium, few goblet cells, with closely packed villi. | Simple columnar epithelium and presence of goblet cells. | Simple columnar epithelium, few villi and goblet cells. | It is made up of simple columnar epithelium with large number of mucus-secreting goblet cells. | Stratified squamous epithelium. |
| SUBMUCOSA | Tough collagenous submucosal layer with accessory salivary glands | Consists of fibro elastic connective tissue with numerous blood and lymphatic vessels and mucous glands. | Deep to the mucosa is a thick layer of connective tissue known as the gastric submucosa. | Presence of mucus secreting Brunner's glands. | Contains only connective tissues and blood vessels. | Presence of Peyer's patches. | Submucosa contains the blood vessels and Meissner nerve plexus. | No specialized structure. |
| MUSCULARIS EXTERNA | Tongue possesses skeletal muscles | Composes of outer longitudinal and inner circular layer. Upper third of oesophagus consists of striated skeletal muscle. The lower third consists of smooth muscle and the medial third contains both types of muscle tissue. | Gastric muscularis externa, also known as Tunica muscularis, is the smooth muscle located deep to the submucosa. There are distinguished 3 muscular layers, from the inner surface outwards which are: Oblique, Circular and Longitudinal. | Presence of crypts. No Peyer's patches. | Presence of crypts. No Peyer's patches. | Presence of crypts. Peyer's patches extend into submucosa. | Muscular layer is made up of 2 layers of smooth muscle, the inner circular layer and the outer longitudinal layer. | Presence of striated muscle cells. |
| ADVENTITIA/ SEROSA | Adventitia due to a fact that it is not in a cavity. | Serosa covers only abdominal part of oesophagus. The rest of oesophageal tube is covered by adventitia. | Gastric serosa is the outermost layer of the stomach wall. It consists of a layer of simple squamous epithelium, known as mesothelium, and a thin layer of underlying connective tissue. | It is a smooth membrane consisting of a thin layer of cells that secrete serous fluid and a thin layer of connective tissue. | It is a smooth membrane consisting of a thin layer of cells that secrete serous fluid and a thin layer of connective tissue. | It is a smooth membrane consisting of a thin layer of cells that secrete serous fluid and a thin layer of connective tissue. | The serosa is a thin layer of simple squamous epithelial tissue. | Adventitia due to the fact that it is not in a cavity. |